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1-1/1 **Next page** From 1 - 1 Count

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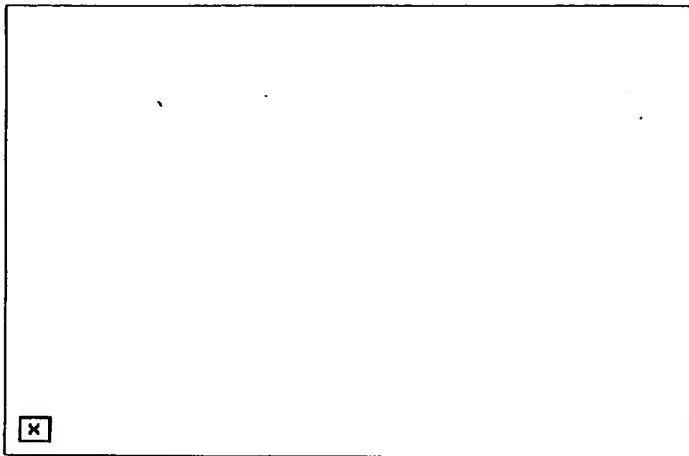
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[19,1997. 9. 5,04] (04,JP,Unexamined Utility Model Publication,1991018044)
Title of invention: Tailing apparatus in card manufacture apparatus
Abstract: [ABSTRACT]

It is installed in the middle of transportation line of a card of card

manufacture apparatus-shaped recording medium and on the other hand of a pair of tailing rollers of tailing apparatus is loaded to the electrode holder which can swing releasably, because the other tailing roller was loaded to other electrode holders with an electrode holder releasably, it makes an electrode holder swing, and a tailing roller is removed from an electrode holder, and it can easily clean.



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Defendant: -

Opponent: -

Classification of trial decision of opposition/date: () []

Final disposition of trial or appeal/date: () []

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Amount of annuity payment: 7Years

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1-1/1 Next page From 1 - 1 Count

Back to list

(57)

[ABSTRACT]**[PURPOSE]**

A pair of rollers removing an alien substance can be removed from the card-shaped recording medium surface individually, and cleaning of a roller is facilitated.

[CONSTITUTION]

Swing is controlled, and *jikushi* is done in axis 92 to frame 13, and outer circumferential surface loads alien substance removal roller 94 having the adhesiveness in Mizobe 91a formed to bracket 91 biased with spring 93 underneath releasably, outer circumferential surface loads alien substance removal roller 96 having the adhesiveness in Mizobe 95a formed to fixed bracket 95 to frame 13 releasably.

[CLAIM FOR THE UTILITY MODEL REGISTRATION]**[Claim 1]**

In alien substance removal apparatus to be installed in in the middle of a transportation line of a letter of card recording medium of the card manufacture device which print of indispensability is made on a card-shaped recording medium, and make a card; Alien substance removal apparatus in a card manufacture device; wherein; As for this alien substance removal apparatus, the surface comprises a pair of alien substance removal rollers having the adhesiveness of the degree that an alien substance of the card-shaped recording medium surface can leave *tenchaku*, one of an alien substance removal roller of these pair is loaded releasably by the holder which can swing, the other alien substance removal roller is loaded with an above holder releasably by other holders.

[Claim 2]

Alien substance removal apparatus in a card manufacture device; according to claim 1 wherein; Said alien substance removal apparatus comprises driving mechanism for a turn to succeed in getting one alien substance removal roller at least.

[BRIEF DESCRIPTION OF DRAWINGS]**[FIG. 1]**

A figure of outline constitution of a card manufacture device comprising alien substance removal apparatus concerning the present invention

[FIG. 2]

A left side elevation view of identity and differentiation thing removal apparatus

[FIG. 3]

Front view of identity and differentiation thing removal apparatus

[FIG. 4]

A perspective diagram of identity and differentiation thing removal apparatus

[FIG. 5]

A schematic illustration of identity and differentiation thing removal apparatus and relativity positional relationship with other units

[FIG. 6]

An illustration of a roller disassembly state of identity and differentiation thing removal apparatus

[FIG. 7]

A plane view of a roller holder

[FIG. 8]

A perspective diagram of conventional alien substance removal apparatus

[DENOTATION OF REFERENCE NUMERALS]

One ... paper feed unit, a leader two ... writer unit, three ... print units, four ... obakotoyunitto, five ... stock storages, six ... movable transfer unit, seven ... changer units, eight ... transport sections, nine ... alien substance removal apparatus, 91,95 ... holders, 94,96 ... alien substance removal rollers.

[DETAILED DESCRIPTION OF THE INVENTION]**[0001]****[INDUSTRIAL APPLICATION FIELD]**

The present invention relates to alien substance removal apparatus in a card manufacture device to use to make an ID card, an optical memory card, a chip card, a bank card, a card such as a prepaid card.

[0002]**[PRIOR ART]**

To make ID cards conventionally, equal, as a card manufacture device it is similar, and to use, thermal head of one is comprised as shown in Japanese Patent Laid-Open No. 1-208193 bulletin or Japanese Patent Laid-Open No. 64-4368 bulletin, supply of a letter of encode done card recording medium is received from the outside, and there is the thing which back *obakoto* which put print of indispensability for a letter of this card recording medium was put for.

[0003]

When an alien substance such as garbage bonds in the surface of a card-shaped recording medium in a card manufacture device stated above, a print quality by thermal head falls, and defectiveness cards increase. Thus, Alien substance removal apparatus as shown in FIG. 8 is incorporated in one part of a card manufacture device. The surface possess holder 202 of one with a pair of rollers 200,201 having the adhesiveness, and outline constitution of this alien substance removal apparatus goes through axis 203 with this holder 202 and, engaging in attachment and detachment liberty and swing liberty to base 204, it is succeeded in getting, hook 206 which was able to possess base 204 in axis 205 established in 202 holder bottom ends again is locked, cancellation leva 207 is operated, and spring 208 is resisted with hook 206 and, rotating, in what is succeeded in getting, hook 206 and a locking state with axis 205 are de-coupled, it is for the structure that can remove two rollers 200,201 every holder 202.

[0004]**[PROBLEM TO BE SOLVED BY THE INVENTION]**

If, in alien substance removal apparatus, a fixed period or the adhesive strength fell in an alien substance bonded to a roller when to some extent it employed, and alien substance removal ability falling, it is necessary to make the alien substance which a roller is washed, and bonded to a roller is removed, and recover from the adhesive strength, but, a pair of alien substance removal rollers were installed by a holder of one, and washing is troublesome, and an alien substance cannot be dropped enough. In addition, Because driving mechanism of an itself roller is not provided in conventional alien substance removal apparatus, a letter of card recording medium is sent into between a pair of alien substance removal rollers by driving force of mechanism it disposes, and to be next to an extremely small point between two mechanism having a drive function, and a letter of card recording medium must be drawn from an alien substance removal roller interval of these pair, the degree of freedom of a layout is extremely limited. Furthermore, An expensive person is become without conventional structure is complicated, and can employ a general-purpose article.

[0005]**[MEANS TO SOLVE THE PROBLEM]**

It is installed in the middle of a transportation line of a letter of card recording medium of the card manufacture device which the present invention puts print of indispensability for a card-shaped recording medium to solve the problem, and make a card and one of an alien substance removal roller of the pair of alien substance removal apparatus comprising a pair of alien substance removal rollers is loaded to the holder which can swing releasably, the other alien substance removal roller was loaded to other holders with the holder releasably.

[0006]**[OPERATION]**

Because, by means of passing a pair of alien substance removal roller, the alien substance which bonded to the letter of card recording medium surface can be removed, and a card-shaped recording medium is loaded to the holder that either of these alien substance removal rollers can swing releasably, when an alien substance

accumulated on an alien substance removal roller, it makes a holder swing, and an alien substance removal roller is removed from a holder, and it can easily clean.

[0007]

[EXAMPLE]

An example of the present invention is explained below referring to an attached drawing. Here, As for FIG. 1, as for figure of outline constitution, figure 2 of a card manufacture device comprising alien substance removal apparatus concerning the present invention - figure 4, as for left side elevation view of identity and differentiation thing removal apparatus, front view and perspective diagram, FIG. 5, schematic illustration of identity and differentiation thing removal apparatus and relativity positional relationship with other units, FIG. 6 remove a roller in identity and differentiation thing removal apparatus, and illustration of a state, FIG. 7 are plane views of a roller holder.

[0008]

This card manufacture device is printed with *obakotoyunitto* 4 which puts print of an overcoat for picture, print unit 3 to put print such as a letter for and letter of card recording medium C after print by leader writer unit 2 to put a magnetic recording for paper feed unit 1 a blade receives a lot of card to use to print-shaped recording medium C, and to do a paper feed and letter of card recording medium C and letter of card recording medium C, and *obakoto* comprises movable transfer unit 6 which transports letter of card recording medium C supplied from stock storage 5 receiving letter of done card recording medium C and leader writer unit 2 to print unit 3, *obakotoyunitto* 4 and stock storage 5 sequentially. And, Between paper feed unit 1 and leader writer unit 2, *kai** does alien substance removal apparatus 9 concerning the present invention.

[0009]

As for paper feed unit 1, by one piece sends card of a majority blade received in card manager 11-shaped recording medium C out to leader writer unit 2 with the twelfth class paper feed roller. Leader writer unit 2 goes through alien substance removal apparatus 7 described below, and paper feed letter of done card recording medium C records predetermined data in a case having a magnetic stripe from paper feed unit 1, it is sent out to changer unit 7 of back movable transfer unit 6 which ensured whether the record is done surely.

[0010]

With stage 31 which print unit 3 puts card-shaped recording medium C, and do transfer between transport section 8 of movable transfer unit 6, it is sent out, and roller 32 and yellow (Y), magenta (M) that it is wound off, and was laid in a tensioned condition between roller 33, transcription film 34 which applied each ink of fusion characteristics or sublimation characteristics of cyan (C) with predetermined pace and thermal head 35 are comprised. *obakoto* business film 44 which impregnated stage 41 which *obakotoyunitto* 4 puts card-shaped recording medium C, and do transfer between transport section 8 of movable transfer unit 6 and the heat fusion type resin that it is sent out, and it is to roller 42 and the overcoat which it is wound off, and was laid in a tensioned condition between roller 43 and thermal head 45 are comprised.

[0011]

After 90 degrees converted a conveying direction of card supplied from leader writer unit 2-shaped recording medium C to movable transfer unit 6, and having positioned, from transport section 8 transporting letter of card recording medium C sent out from changer unit 7 to send out and this changer unit 7 sequentially, transport section 8 comprises endless belt 83 laid across 81,82 ken rollers in a tensioned condition.

[0012]

Alien substance removal apparatus 9 is installed in 13 frame front end of paper feed unit 1 as shown in FIG. 2, *jikushi* does holder 91 in swing liberty in axis 92 to frame 13, and it is biased with spring 93 underneath, outer circumferential surface loads an axis of alien substance removal roller 94 having the adhesiveness in Mizobe 91a formed to this holder 91 releasably. In addition, Notch 91b is formed as shown in FIG. 7 to holder 91, at a glance it is found whether an alien substance accumulates only in which to alien substance removal roller 94.

[0013]

In addition, Another holder 95 is fixed to frame 13, outer circumferential surface loads an axis of alien substance removal roller 96 having the adhesiveness in Mizobe 95a formed to this holder 95 releasably, holder 95 can swing, and possess, and hook 97 to hold this roller 96 in Mizobe 95a is biased so that end of hook 97 abuts with roller 96 with spring 98.

[0014]

And, Gear 101 engaged to gear 100 rotated in paper feed unit 1 side is loaded in turn liberty to holder 95,

loaded gear 102 can be engaged with alien substance removal roller 96 to this gear 101.

[0015]

Next, When operation of alien substance removal apparatus 9 in a card manufacture device composed as above is explained, letter of card recording medium C is sent to 21,22 ken rollers rotationally driven with motor 21 of leader writer unit 2 from alien substance removal apparatus 9 by letter of card recording medium C which it is sent, and was sent out from 16,17 ken rollers rotationally driven with motor 15 of paper feed unit 1 as shown in FIG. 5 is broken to 94,96 ken alien substance removal rollers of alien substance removal apparatus 9, and gear 101,102 are gone through with transmitted gear 100, and it being rotationally driven rotatory power of motor 15 of paper feed unit 1 entering, roller 96.

[0016]

In this way, An alien substance such as garbage bonding to the letter of card recording medium C surface bonds to 94,96 roller surface, and, by means of card-shaped recording medium C passing 94,96 ken alien substance removal rollers, it is removed by the surface adhesive strength of alien substance removal roller 94,96.

[0017]

Then, Because alien substance removal roller 94 holds with holder 91 which can swing, and it is biased in alien substance removal roller 96 side, letter of card recording medium C can penetrate to 94,96 ken rollers smoothly, and 94,96 roller surface is pushed to the letter of card recording medium C surface, and the adhesive strength of roller 94,96 is shown enough. In addition, A top and bottom thrust function becomes needless, and a general-purpose article can be used, reduction of a cost can be planned.

[0018]

And, When an alien substance accumulates on 94,96 alien substance removal roller surface by means of repetition of alien substance removal movement, and the adhesive strength deteriorated, alien substance removal roller 94 is removed from Mizobe 91a of holder 91 by spring 93 is resisted, and lifting holder 91 as shown in FIG. 6, after hook 96 was de-coupled again, and alien substance removal roller 96 was removed from Mizobe 95a of holder 95, and having done washing, an alien substance removal function can be restored by putting back alien substance removal roller 94,96 by operation to be reverse to the above.

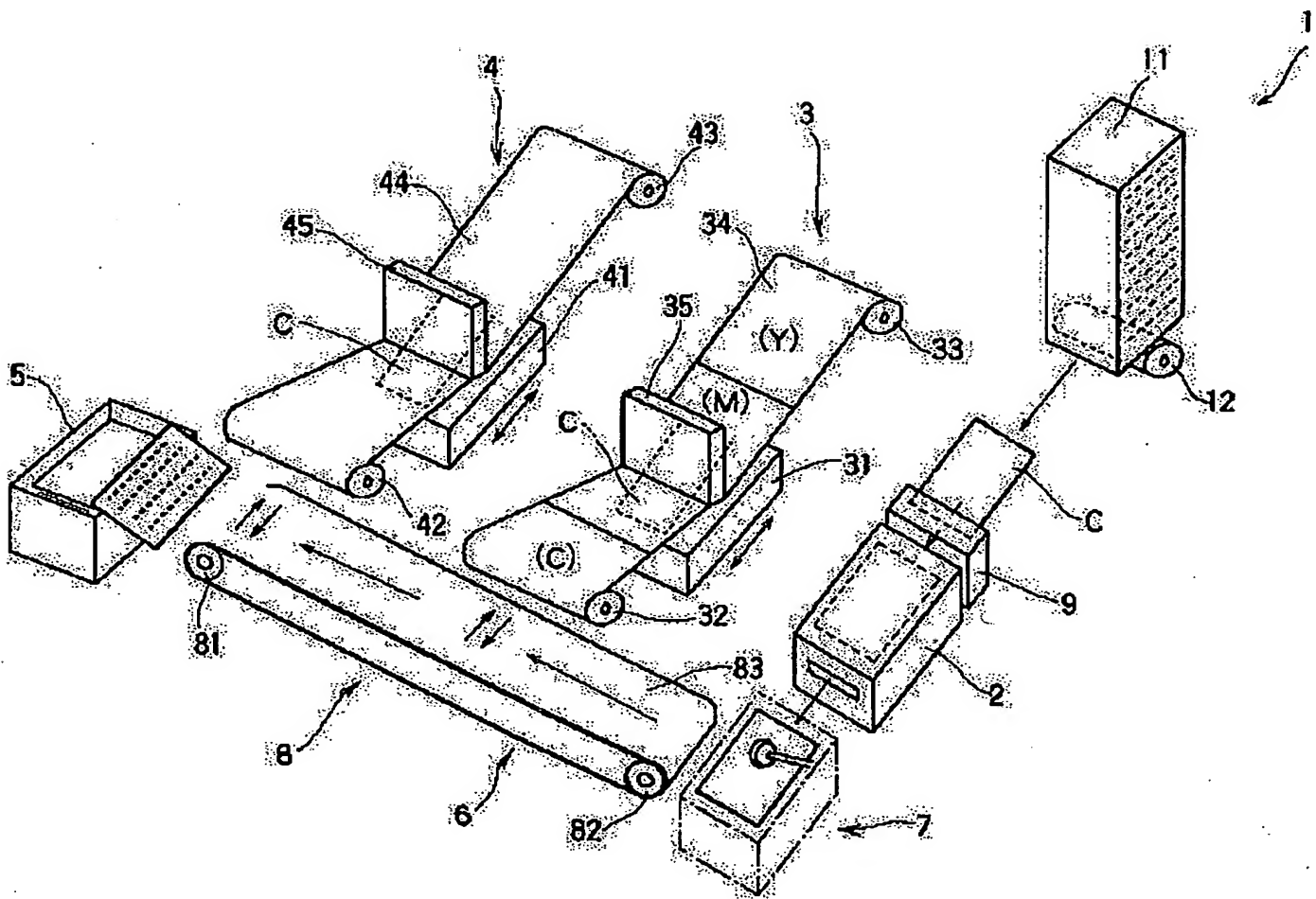
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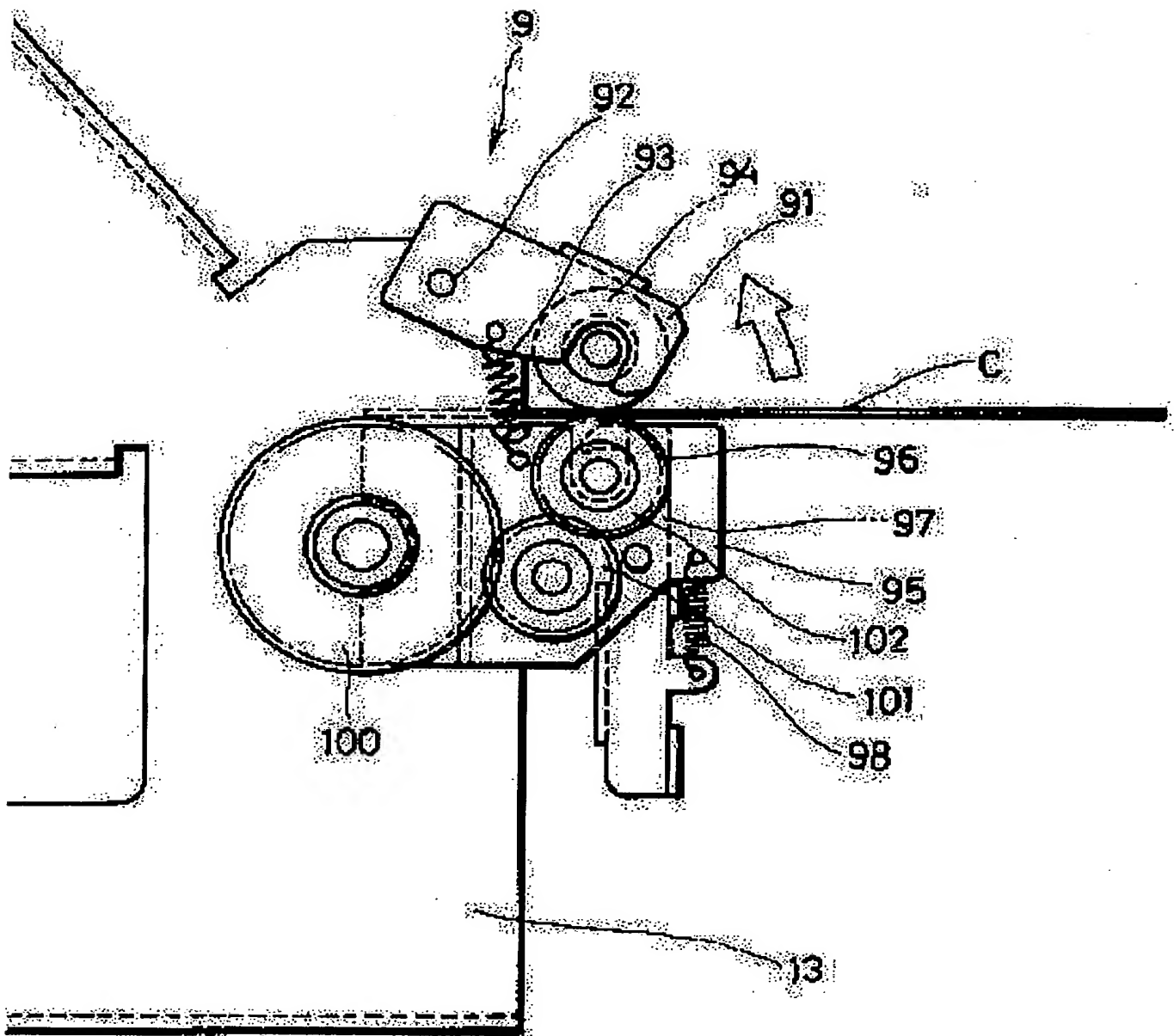
In addition, By means of arranging alien substance removal apparatus 9 between paper feed unit 1 and leader writer unit 2, print defectiveness can be reduced, and that an alien substance enters in leader writer unit 2 can be prevented.

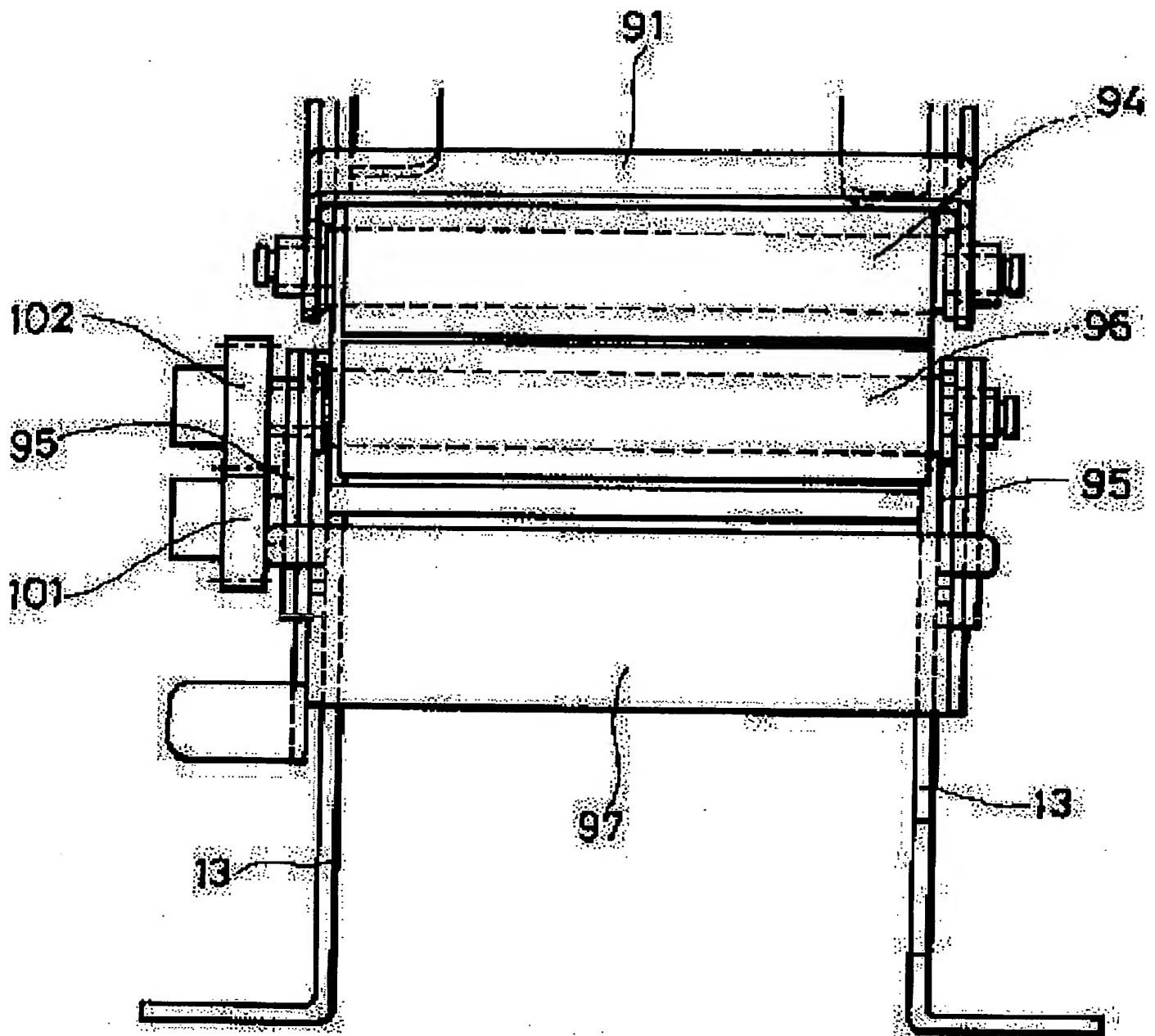
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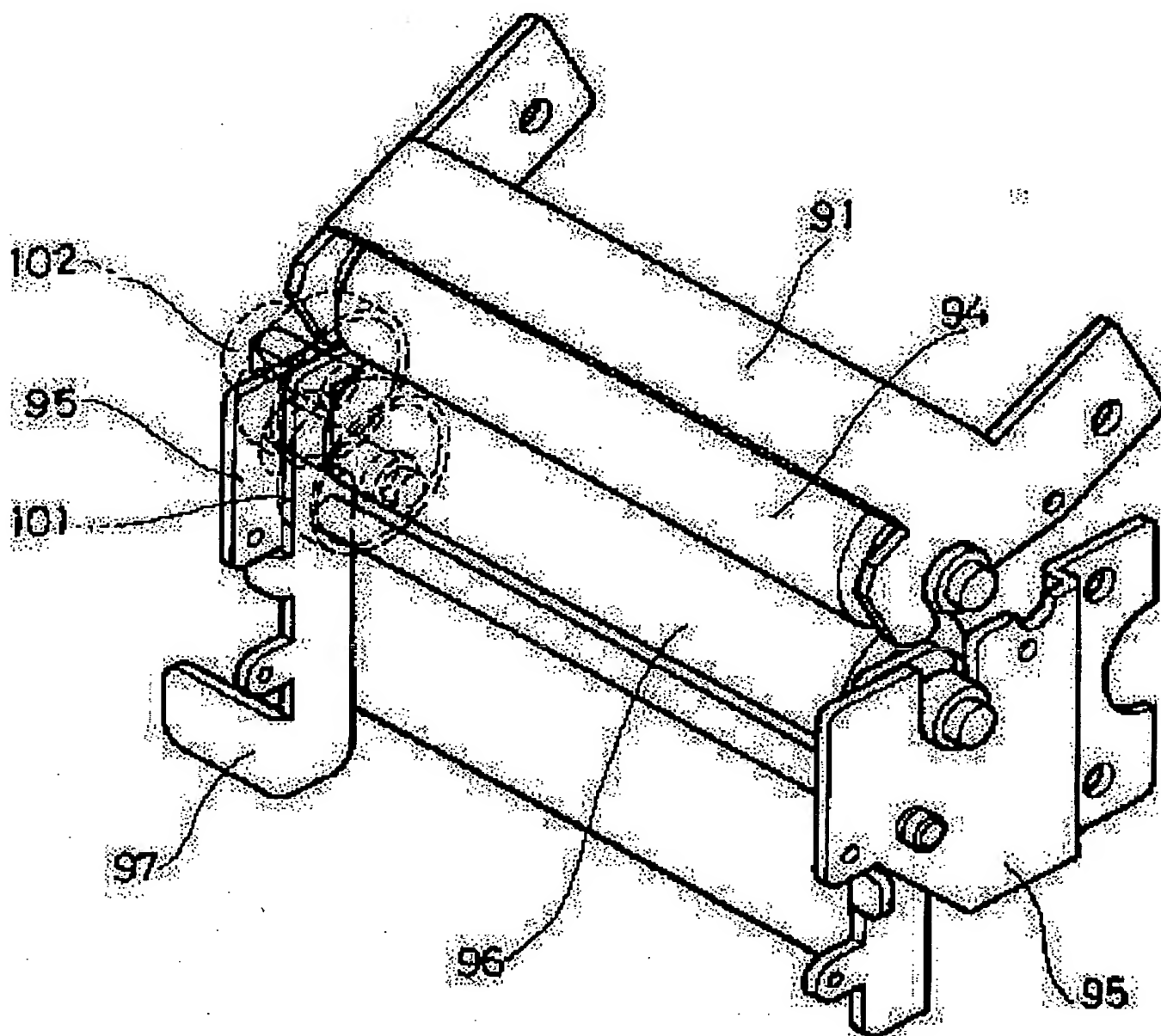
[EFFECT OF THE INVENTION]

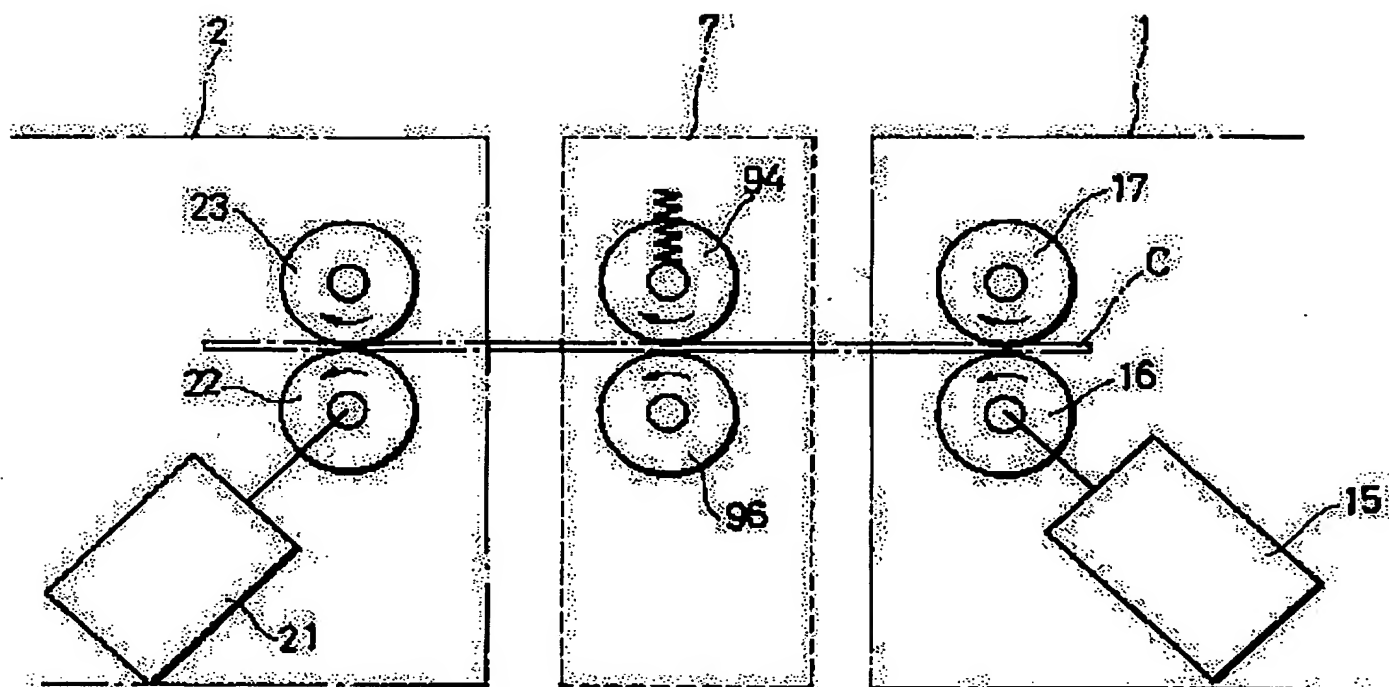
Because, according to the present invention, it was loaded to the holder that either of the a pair of alien substance removal rollers which removed the alien substance which bonded to the card-shaped recording medium surface could swing releasably as had explained in the above, because by 1 can do disassembly of an alien substance removal roller separately, washing of a roller easily do, and recovery of removal ability becomes easy. In addition, The degree of freedom as opposed to a placement place of alien substance removal apparatus rises by arranging the driving mechanism that a turn succeeds in getting an alien substance removal roller in alien substance removal apparatus in itself.

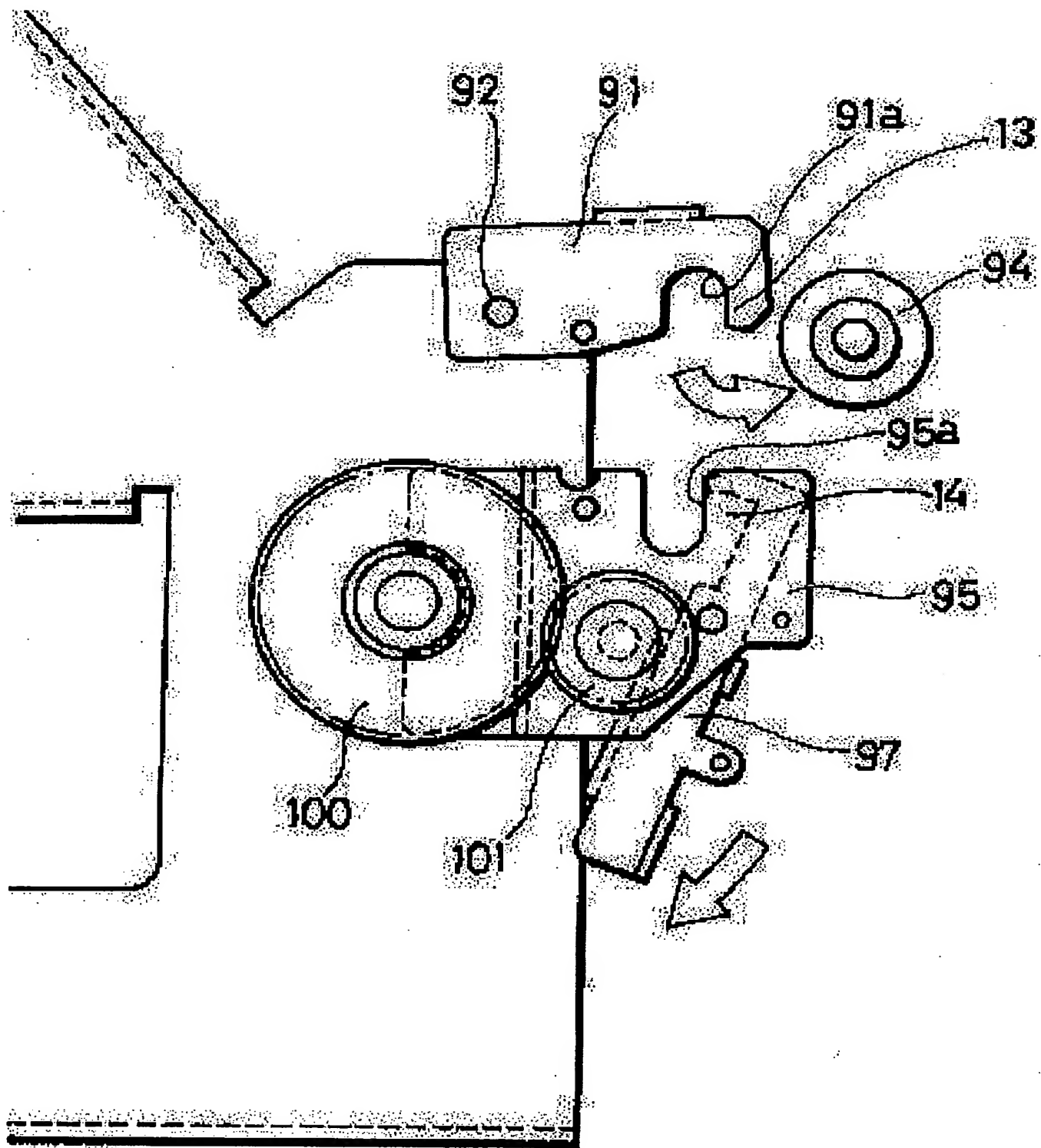


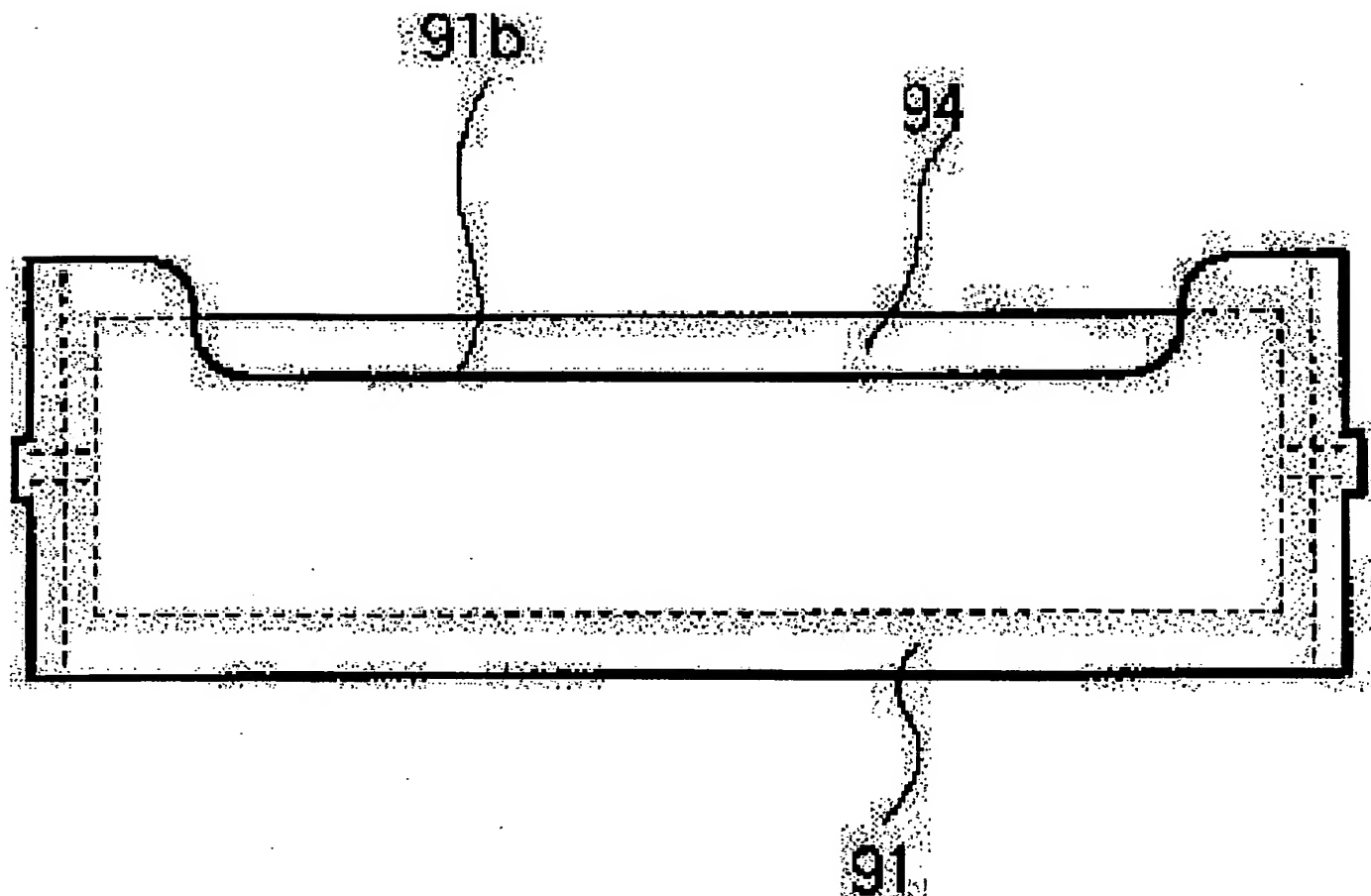


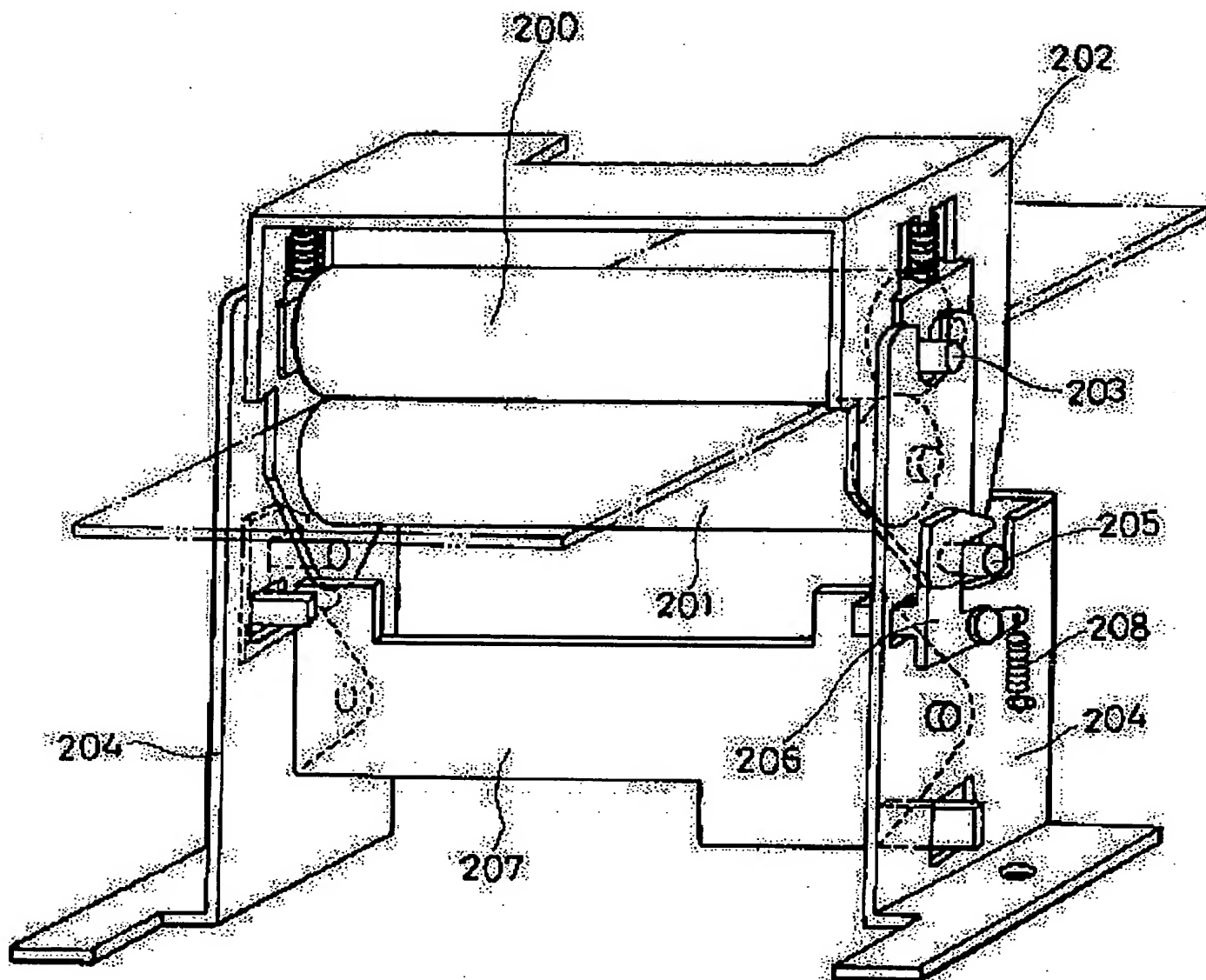












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